RCM

Naftex Operating Company

Mailing Address:
P.O. Box 308
Edison, California 93220

Physical Address:
14333 Breckenridge Rd.
Bakersfield, California 93307

phone 661.363.8801
fax 661.363.8842

July 7, 2015

Mr. Ronald Holcomb
Central Valley Regional Water Quality Control Board
1685 E Street
Fresno, CA 93706

Re: California Water Code Directive Pursuant to Section 13267, received April 23, 2015.

Dear Mr. Holcomb:

In accordance with the referenced California Water Code Directive Pursuant to Section 13267 (Directive), please accept this letter as Naftex Operating Company's (Naftex) response to the Directive.

Therefore, this letter serves as a technical report addressing Central Valley Regional Water Quality Control Board's (CVRWQCB) request for the collection and analysis of wastewater samples - and other pertinent information - for the listed ponds in Attachment A of the Directive (copy attached).

As per the Directive, Attachment A, the following ponds listed are as follows:

Operator:	Oil Field:	Lease:	No. of Ponds:
Naftex Operating Co.	Edison	Charisma-Claflin	3
Naftex Operating Co.	Edison	Racetrack	1

The data provided below is in direct response to the referenced directive, Page 3 (Naftex responses are italicized):

1. **By 7 July 2015**, submit a technical report containing the following information:

   A. Identification of any discharges of oil field produced waters to land, including but not limited to ponds, since April of 2014 that are not listed in Attachment A;

   Since April, 2014, Naftex experienced – and reported – two separate discharges to land:

- *May 12, 2014: Knapp Lease tank farm; release of approximate 210 barrels of crude oil and produced water; all product retained within the tank farm block wall berm. Naftex reported the incident to California State, Office of Emergency Services, control number 14-2718.*
- *September 29, 2014: USL Lease tank farm; release of approximate 240 barrels of crude and produced water; all product retained with in tank farm berm. Naftex reported the incident to California State, Office of Emergency Services, control number 14-5511.*

B. Collect representative samples of wastewater within each of the ponds. Samples must be analyzed in accordance with the water quality analysis and reporting requirements contained in Attachment B to this Order[1]; If a representative sample cannot feasibly be collected from one or more of the sources discharging to a surface impoundment(s), then a comment will need to be added to the technical report required by this order demonstrating that collection of a representative sample from a specific source is note feasible within the required time frame, and propose an alternative sampling procedure…

Naftex contracted with a local certified environmental testing laboratory, BC Laboratories, Inc., to collect the required samples of wastewater within the above listed ponds and analyze the samples in accordance with the referenced Directive, Attachment B.

- *Charisma-Claflin: Upon assuming operations of the Charisma-Claflin lease in November, 2012, Naftex ceased discharging into the ponds (as previously reported, annually, in accordance with Waste Discharge Requirements Order 92-11030). There are three ponds connected in series. As the attached BC Laboratories, Inc. report demonstrates, no representative sample was collected due to the ponds being dry and containing no fluid.*

- *Racetrack: BC Laboratories, Inc. collected and analyzed the required representative samples; please see attached report (including analytical results provided in an electronic table format in Microsoft Excel).*

C. All available information for each of the surface impoundment(s), including dimensions (i.e.: length, width, and depth), latitude and longitude Assessor's Parcel Numbers of the lease, duration of the discharge (in months), and the volume of wastewater discharged per year.

- *Charisma-Claflin: All such requested information is provided in attached table format.*
- *Racetrack: All such requested information is provided in attached table format.*

D. A location map that includes the following information:

i. All surface impoundment(s) at the Facility,
ii. Include the boundary lines for all leases at the Facility, and
iii. Legend with the name of the surface impoundment(s).

- *Charisma-Claflin: All such requested information is provided in attached map.*
- *Racetrack: All such requested information is provided in attached map.*

In completing the technical report, and in accordance with the referenced Directive, the following "certification" statement is provided:

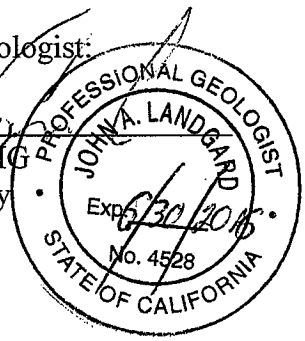
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Preparer:

Randal K. Horne,
Naftex Operating Company,
Env. H&S Manager

California Professional Geologist:

John A. Landgard, RG, CHG
Naftex Operating Company
Sr. Geologist



STATEMENT OF LIMITATIONS

All work performed including data collection, analyses, and reporting has been performed accordance to industry accepted standards and practices generally accepted by other geologists experienced in the petroleum field. No other warranty, either expressed or implied, is made.

Should you have questions regarding this technical report, or need further information, please contact me at either e-mail address: rhorne@naftex.com or telephone: (661) 363-8801, ext. 215.

Sincerely,

Randal K. Horne
Environmental, Health and Safety Manager

Attachments:

- 23 April 2015, CVRWQCB Directive 13267.
- BC Laboratories, Inc. report/work order number 1510325.
- Naftex surface impoundments information.
- Naftex location map(s)

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

23 April 2015

Hormoz Ameri
Naftex Operating Company
1900 Avenue of the Stars, Suite 2450
Los Angeles, CA 90067

CERTIFIED MAIL
7014 1200 0000 3347 7074

CALIFORNIA WATER CODE DIRECTIVE PURSUANT TO SECTION 13267. You are legally obligated to respond to this Order. Please read this Order carefully.

Naftex Operating Company (hereafter Discharger) has been identified as the owner or operator of petroleum production wastewater disposal ponds (ponds). A list of the ponds (and the leases and oil fields where they are located) that the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) identifies as under your control is presented in Attachment A. Ponds for the disposal of wastewater generated during the course of petroleum production have the potential to affect the quality of groundwater (a water of the State). Groundwater underlying the areas where your ponds are located have beneficial uses as identified in the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan).

This order requires the collection and analysis of wastewater samples collected from each of the ponds listed in Attachment A to characterize the discharge. Each sample is to be analyzed for each of the constituents listed in Attachment B. These data are needed to comprehensively characterize wastewater in each pond and provide data needed to evaluate the threat to the quality of waters of the State. If more than one pond is connected in series (i.e., one pond drains directly to the next with no other source of inflow) then only the upstream pond must be sampled. This order is not intended to require the collection of duplicative data. If during the 12 months (one year) prior to the date of this order, samples required by this order have been analyzed from one or more of the ponds for the required constituents, that data can be submitted for the appropriate order requirements.

This order also requires Discharger to identify any discharge(s) of oil field wastewater to land that is not identified in Attachment A. Discharger must also collect and analyze wastewater samples in accordance with Attachment B from any additionally identified discharge to characterize the discharge.

The Central Valley Water Board's authority to require technical reports derives from Section 13267 of the California Water Code, which specifies, in part, that:

(a) A regional Board ... in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the State within its region.

(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefit to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The Central Valley Water Board is concerned about the potential impacts to water quality posed by the discharge of oil field produced waters in surface ponds. The technical information and reports required by this order are necessary to assess the potential threat to water quality. The need to understand the potential impacts to water quality justify the need for the information and reports required by this order. Based on the nature and possible consequences of the discharges of waste, the burden of providing the required information, including the reporting costs, bears a reasonable relationship to the need for the report, and the benefits to be obtained. Discharger is required to submit this information and reports because it is the operator of the ponds listed in Attachment A of this order.

The unauthorized discharge of waste containing oil field waste constituents to land, including unlined ponds, may result in the degradation of water quality and creates or threatens to create, a condition of pollution in groundwater. Significant concentrations of salinity (measured as TDS and EC), significant contributors to salinity such as chloride and sulfate, and boron are present in oil field wastewater. Other potential constituents such as, but not limited to, metals, radionuclides, and organic compounds pose a threat to water quality. The concentrations of these waste constituents in wastewater being discharged needs to be known to evaluate the threat. In addition, all locations where these discharges are occurring needs to be known.

Underlying groundwater can be degraded if mixed with oil field wastewater. Elevated concentrations of oil field waste constituents could impair the groundwater for municipal and domestic supply and agricultural supply uses.

Under the prescribed authority of California Water Code section 13267, the Central Valley Water Board directs Discharger to:

1. **By 7 July 2015**, submit a technical report containing the following information:

   A. Identification of any discharges of oil field produced waters to land, including but not limited to ponds, since April of 2014 that are not listed in Attachment A;

   B. Collect representative samples of wastewater within each of the ponds. Samples must be analyzed in accordance with the water quality analysis and reporting requirements contained in Attachment B to this Order;[1]

      If a representative sample cannot feasibly be collected from one or more of the sources discharging to a surface impoundment(s), then a comment will need to be added to the technical report required by this Order demonstrating that collection of a representative sample from a specific source is not feasible within the required timeframe, and propose an alternative sampling procedure and expeditious time schedule for obtaining a representative sample for each source. Alternative sampling procedures and time schedules are subject to approval by the Assistant Executive Officer of the Central Valley Regional Water Quality Control Board.

   C. All available information for each of the surface impoundment(s), including dimensions (i.e., length, width, and depth), latitude and longitude, Assessor's Parcel Numbers of the lease, duration of the discharge (in months), and the volume of wastewater discharged per year.

   D. A location map that includes the following information:

      i. All surface impoundment(s) at the Facility,
      ii. Include the boundary lines for all leases at the Facility, and
      iii. Legend with the name of the surface impoundment(s).

2. **By 6 May 2015**, Discharger needs to contact Dane S. Johnson of this office at (559) 445-5525 if you have received this Order and cannot collect the required samples.

[1] All previously obtained analytical data for oil field produced wastewater samples collected at the Facility, if any, with a description of the source and location for each analysis may be submitted in the alternative for re-running tests if the sample(s) was collected and analyzed within 12 months (one year) of the date of this order.

The technical report required by this Order must be submitted to the attention of:

Ronald Holcomb
Central Valley Water Board
1685 E Street
Fresno, CA 93706

Based on the information submitted in the technical report, additional information or action may be required.

With the report required by this Order, Discharger shall provide under penalty of perjury under the laws of California a "Certification" statement to the Central Valley Water Board. The "Certification" shall include the following signed statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The Central Valley Water Board reserves the right to issue a Notice of Violation or pursue enforcement for Discharger's activities after reviewing the documentation provided in response to this Order.

The Technical Report is to be signed and stamped by a California Professional Engineer (Registered as a Civil Engineer) or a registered California Professional Geologist. Any laboratory analyses shall be performed by an analytical laboratory certified by the State of California for the analyses performed. Submissions pursuant to this Order shall include a statement by Discharger, or an authorized representative of Discharger, certifying (as described above) that the information submitted is true, complete, and accurate.

The failure to furnish the required report, or the submission of a substantially incomplete report or false information, is a misdemeanor, and may result in additional enforcement actions being taken against Discharger, including issuance of an Administrative Civil Liability Complaint pursuant to California Water Code section 13268. Liability may be imposed pursuant to California Water Code section 13268 in an amount not to exceed one thousand dollars ($1,000) for each day in which the violation occurs. All discharges to unpermitted ponds should cease pending review and submission of the technical information sought by this order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections

2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 days after the date of this directive, except that if the thirtieth day following the date of this directive falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

If you have any questions regarding this matter, please contact Doug Patteson of this office at (559) 445-5577 or at doug.patteson@waterboards.ca.gov.

FOR Clay L. Rodgers
Assistant Executive Officer

cc: Julie Macedo, Office of Enforcement, State Water Resources Control Board, Sacramento
Mike Toland, California Division of Oil, Gas, and Geothermal Resources, Bakersfield

ATTACHMENT A

The following table contains the names of oil fields and lease(s) and the corresponding number of ponds that the Central Valley Water Board has identified as active and under your control:

OPERATOR	OIL FIELD	LEASE	NO. OF PONDS
Naftex Operating Company	Edison	Charisma-Claflin	3
		Racetrack	1

ATTACHMENT B

Water Quality Analysis

Wastewater samples collected from the ponds shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program using currently applicable United States Environmental Protection Agency-approved analytical methods for water for the following:

A. Total dissolved solids;

B. Metals listed in California Code of Regulations, title 22, section 66261.24. subdivision (a)(2)(A);

C. Benzene, toluene, ethylbenzene, and xylenes;

D. Total petroleum hydrocarbons as crude oil;

E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorine, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene);

F. Radionuclides listed under California Code of Regulations, title 22, Table 64442;

G. Major and minor cations (including sodium, potassium, magnesium, and calcium);

H. Major and minor anions (including nitrate, chloride, sulfate, carbonate, bicarbonate, and bromide);

I. Trace elements (including lithium, strontium, boron, iron, and manganese).

Reporting Requirements

Water Quality information shall be submitted in a technical report that includes at a minimum:

A. Site plan(s) with the location(s) of where the samples were collected;

B. A description of how the samples, representative of the pond contents, were collected;

Table(s) of analytical results organized by pond number with the data also submitted electronically as an Excel spreadsheet.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 07/06/2015

Randy Horne

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Client Project:	[none]
BCL Project:	Produced Water Pond Testing
BCL Work Order:	1510325
Invoice ID:	B203616

Enclosed are the results of analyses for samples received by the laboratory on 4/30/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerrie S. Vaughan

Contact Person: Kerrie Vaughan
Client Services

Authorized Signature

Table of Contents

Case Narratives

Case Narrative for Work Order 1510325

1510325-02:

No sample available for testing.

BC Laboratories, Inc.

Chain of Custody Form

Page 1 of 1

Report To: Client: Naftex	Project #:
Attn: Randy Horne	Project Name:
Street Address: PO BOX 308	
City, State, Zip: Edison CA 93220	Sampler(s): R. Oglatree
Phone: 330-2044 Fax:	
Email Address: rhorne@naftex.com	
Work Order #: 15-10325	

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	TDS, Metals	Anions	BTEX, PNA, TPH (crude)	Radium 226	Radium 228	GA	NO Sample	Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
1	Race Track Emergency Sump	4/30/15	10:40	X	X	X	X	X	X									Sample #2: NO Sample
2	Claflin Sump	" " "	11:00							X								available - DRY NO Water
																		contains:
																		1-LPU, 3 LPW/HNO3, 3-VOAs
																		w/HCL + 2-1LAGU

CHK BY: MW | DISTRIBUTION: [illegible] | SUB-OUT ☑

Billing ☐ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☐ No

Send Copy to State of CA? (EDT) ☐ Yes ☐ No

Global ID (Needed for EDF)

System # (Needed for EDT)

Relinquished By	Date	Time	Received By	Date	Time
1. Rick E Oglatree	4/30/15	12:52	1. [signature]	4/30/15	12:52
2.			2.		
3.			3.		

BC Laboratories, Inc. – 4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

Chain of Custody and Cooler Receipt Form for 1510325 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-10325

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☒

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☐ Comments:

All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐

COC Received
☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: TH208 Date/Time 4/30/15 12:52
Temperature: (A) 2.0 °C / (C) 2.1 °C Analyst Init VMB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL	P 4-30-15									
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS	EFG									
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABC									
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER X32	HI									
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: VY Date/Time: 4-30-15 1505 [S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMREC]
A = Actual / C = Corrected

Assigned to: RD

Field Service
Sampling Request Form

Today's Date: 4/30/15 Project Name _____

Company: Naftex Office #: _____
Address: _____
Cell #: _____

Contact: Randy Horne Completed by: R. Ogletree

( )Sample P/U pickup ( )Bottle D/O drop off ( )Pick up & Drop off (X)Sampling

Date Needed: _____ Sample will be ready by: _____ Office closes at : _____

Number of coolers client will have _____

Pick up at site ( )
Pick up at office ( ) (above address)

Short holding times or Rushes: _____

Information: Sumps

Quantity of Samples: 2 (1-was dry no sample)

Matrix: AQ

Supplies Needed: 3-1LP w/HNO3, 2-1AGU, 1-LPU, 3 VOA's w/HCl

Analysis: _____

BILLING:
Billing Charges for Courier/Field Time:
Time: 2.25 Bottle order Delivery: _____
Miles: 33 Flat Rate: _____
Equipment: _____
Return with Chain of Custody for billing purposes.

Field Service Request form1.doc

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1510325-01	**COC Number:**	---	**Receive Date:**	04/30/2015 12:52
	Project Number:	---	**Sampling Date:**	04/30/2015 10:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	Race Track Emergency Sump	**Lab Matrix:**	Water
	Sampled By:	Rick Ogletree	**Sample Type:**	Water
1510325-02	**COC Number:**	---	**Receive Date:**	04/30/2015 12:52
	Project Number:	---	**Sampling Date:**	04/30/2015 11:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	Claflin Sump	**Lab Matrix:**	Water
	Sampled By:	Rick Ogletree	**Sample Type:**	Water

BC LABORATORIES, INC
4100 Atlas Ct. Bakersfield, Ca. 93308 Tel: (800) 978 - 4911 Website: www.bclabs.com

Case Narrative, work order 1510325

On May 30, 2015 BC Laboratories, Inc. attempted to collect water samples for miscellaneous testing as per **CALIFORNIA WATER CODE DIRECTIVE PURSUANT TO SECTION 13267** at the following locations:

Naftex Operating Company; Race Track Emergency Sump (1510325-01)

Naftex Operating Company; Claflin Sump (1510325-02)

Aqueous samples were obtained from Race Track Emergency Sump with no problems noted.

Claflin Sump was dry and subsequently did not have water available for collection and testing.

Sampling Technique:

Samples were collected from surface impoundments using a dipper equipped with a 15'-20' extension pole. The dipper consisted of a glass beaker attached to a 15'-20' pole. The beaker was carefully submerged below the surface while orienting beaker on its side. Once filled, the beaker was rotated up then slowly brought to surface. The sample was dispensed into individual containers appropriately preserved and placed on ice and delivered to laboratory for analyses.

Regards,

Robert D. Cortez
BC Laboratories, Inc.
Petroleum/Env. Department Manager
(661) 327-4911 Ext. 243 office
(661) 378-4465 cell
robert.cortez@bclabs.com

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1510325-01 | **Client Sample Name:** Race Track Emergency Sump, 4/30/2015 10:40:00AM, Rick Ogletree

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	94.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	86.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	05/01/15	05/01/15 13:07	SE1	MS-V10	1	BYD2654

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 1510325-01 | **Client Sample Name:** Race Track Emergency Sump, 4/30/2015 10:40:00AM, Rick Ogletree

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	ND	ug/L	0.10	0.055	EPA-8270C-SIM	ND		1
Acenaphthylene	ND	ug/L	0.10	0.047	EPA-8270C-SIM	ND		1
Anthracene	ND	ug/L	0.10	0.017	EPA-8270C-SIM	ND		1
Benzo[a]anthracene	ND	ug/L	0.10	0.026	EPA-8270C-SIM	ND		1
Benzo[b]fluoranthene	ND	ug/L	0.10	0.040	EPA-8270C-SIM	ND		1
Benzo[k]fluoranthene	ND	ug/L	0.10	0.051	EPA-8270C-SIM	ND		1
Benzo[a]pyrene	ND	ug/L	0.10	0.026	EPA-8270C-SIM	ND		1
Benzo[g,h,i]perylene	ND	ug/L	0.10	0.043	EPA-8270C-SIM	ND		1
Chrysene	ND	ug/L	0.10	0.022	EPA-8270C-SIM	ND		1
Dibenzo[a,h]anthracene	ND	ug/L	0.10	0.044	EPA-8270C-SIM	ND		1
Fluoranthene	ND	ug/L	0.10	0.012	EPA-8270C-SIM	ND		1
Fluorene	ND	ug/L	0.10	0.030	EPA-8270C-SIM	ND		1
Indeno[1,2,3-cd]pyrene	ND	ug/L	0.10	0.044	EPA-8270C-SIM	ND		1
Naphthalene	ND	ug/L	0.10	0.077	EPA-8270C-SIM	ND		1
Phenanthrene	ND	ug/L	0.10	0.022	EPA-8270C-SIM	ND		1
Pyrene	ND	ug/L	0.10	0.022	EPA-8270C-SIM	ND		1
Nitrobenzene-d5 (Surrogate)	114	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	61.8	%	50 - 120 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	51.8	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C-SIM	05/01/15	05/05/15 20:16	MK1	MS-B4	1	BYE0254

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Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Total Petroleum Hydrocarbons

BCL Sample ID: 1510325-01 | **Client Sample Name:** Race Track Emergency Sump, 4/30/2015 10:40:00AM, Rick Ogletree

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
TPH - Crude Oil	**11000**	**ug/L**	**1000**	**280**	**EPA-8015B/FFP**	ND	**A01**	1
Tetracosane (Surrogate)	59.2	%	37 - 134 (LCL - UCL)		EPA-8015B/FFP		A01	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/FFP	05/01/15	05/05/15 06:04	MWB	GC-13	2	BYE0253

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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Water Analysis (General Chemistry)

BCL Sample ID: 1510325-01 | **Client Sample Name:** Race Track Emergency Sump, 4/30/2015 10:40:00AM, Rick Ogletree

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Total Calcium	18	mg/L	0.10	0.015	EPA-6010B	0.032		1
Total Magnesium	1.7	mg/L	0.050	0.019	EPA-6010B	ND		1
Total Sodium	330	mg/L	0.50	0.051	EPA-6010B	ND		1
Total Potassium	17	mg/L	1.0	0.13	EPA-6010B	ND		1
Bicarbonate Alkalinity as CaCO3	310	mg/L	8.2	8.2	EPA-310.1	ND		2
Carbonate Alkalinity as CaCO3	15	mg/L	8.2	8.2	EPA-310.1	ND		2
Bromide	1.3	mg/L	0.20	0.070	EPA-300.0	ND	A07	3
Chloride	310	mg/L	1.0	0.12	EPA-300.0	ND	A07	3
Sulfate	8.9	mg/L	2.0	0.20	EPA-300.0	ND	A07	3
Total Dissolved Solids @ 180 C	1100	mg/L	50	50	EPA-160.1	ND		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/15	05/06/15 09:05	ARD	PE-OP3	1	BYE0329
2	EPA-310.1	05/05/15	05/05/15 08:16	RML	MET-1	2	BYE0293
3	EPA-300.0	05/05/15	05/05/15 19:29	BMW	IC2	2	BYE0395
4	EPA-160.1	05/04/15	05/04/15 13:00	CAD	MANUAL	5	BYE0154

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Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Metals Analysis

BCL Sample ID: 1510325-01 | **Client Sample Name:** Race Track Emergency Sump, 4/30/2015 10:40:00AM, Rick Ogletree

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	Run #
Hexavalent Chromium	ND	ug/L	2.0	0.70	EPA-7196			1
Total Antimony	ND	mg/L	0.10	0.0085	EPA-6010B	500		2
Total Arsenic	**0.36**	**mg/L**	**0.050**	**0.0078**	**EPA-6010B**	500		2
Total Barium	**0.10**	**mg/L**	**0.010**	**0.0035**	**EPA-6010B**	10000		2
Total Beryllium	ND	mg/L	0.010	0.00050	EPA-6010B	75		2
Total Boron	**1.9**	**mg/L**	**0.10**	**0.013**	**EPA-6010B**			2
Total Cadmium	ND	mg/L	0.010	0.0011	EPA-6010B	100		2
Total Chromium	ND	mg/L	0.010	0.0011	EPA-6010B	2500		2
Total Cobalt	ND	mg/L	0.050	0.0013	EPA-6010B	8000		2
Total Copper	**0.0021**	**mg/L**	**0.010**	**0.0011**	**EPA-6010B**	2500	J	2
Total Iron	**0.89**	**mg/L**	**0.050**	**0.030**	**EPA-6010B**			2
Total Lead	ND	mg/L	0.050	0.0040	EPA-6010B	1000		2
Total Lithium	**0.20**	**mg/L**	**0.020**	**0.0062**	**EPA-6010B**			2
Total Manganese	**0.13**	**mg/L**	**0.010**	**0.0040**	**EPA-6010B**			2
Total Mercury	ND	mg/L	0.00020	0.000033	EPA-7470A	20		3
Total Molybdenum	**0.029**	**mg/L**	**0.050**	**0.0012**	**EPA-6010B**	3500	J	2
Total Nickel	**0.011**	**mg/L**	**0.010**	**0.0020**	**EPA-6010B**	2000		2
Total Selenium	ND	mg/L	0.10	0.015	EPA-6010B	100		2
Total Silver	ND	mg/L	0.010	0.0019	EPA-6010B	500		2
Total Strontium	**0.46**	**mg/L**	**0.010**	**0.0010**	**EPA-6010B**			2
Total Thallium	ND	mg/L	0.10	0.024	EPA-6010B	700		2
Total Vanadium	ND	mg/L	0.010	0.0022	EPA-6010B	2400		2
Total Zinc	ND	mg/L	0.050	0.0023	EPA-6010B	5000		2
Total Recoverable Uranium	**0.11**	**pCi/L**	**0.67**	**0.067**	**EPA-200.8**		J	4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	05/01/15	05/01/15 09:30	TDC	KONE-1	1	BYE0240
2	EPA-6010B	05/05/15	05/06/15 09:05	ARD	PE-OP3	1	BYE0329
3	EPA-7470A	05/06/15	05/08/15 13:58	MEV	CETAC1	1	BYE0426
4	EPA-200.8	05/07/15	05/09/15 01:33	EAR	PE-EL2	1	BYE0570

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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Water Analysis (General Chemistry)

BCL Sample ID: 1510325-02 | **Client Sample Name:** Claflin Sump, 4/30/2015 11:00:00AM, Rick Ogletree

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
No Sample	No Sample	Feet			BC			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	BC	04/30/15	04/30/15 11:00	REO	Inst	1	BYE0083

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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYD2654						
Benzene	BYD2654-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYD2654-BLK1	ND	ug/L	0.50	0.098	
Toluene	BYD2654-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYD2654-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYD2654-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYD2654-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYD2654-BLK1**	**96.4**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYD2654-BLK1**	**102**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYD2654-BLK1**	**91.8**	%	**80 - 120 (LCL - UCL)**		

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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYD2654										
Benzene	BYD2654-BS1	LCS	28.700	25.000	ug/L	115		70 - 130		
Toluene	BYD2654-BS1	LCS	27.960	25.000	ug/L	112		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYD2654-BS1	LCS	9.9500	10.000	ug/L	99.5		75 - 125		
Toluene-d8 (Surrogate)	BYD2654-BS1	LCS	9.9800	10.000	ug/L	99.8		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYD2654-BS1	LCS	9.7100	10.000	ug/L	97.1		80 - 120		

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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYD2654	Used client sample: N										
Benzene	MS	1506890-84	ND	28.220	25.000	ug/L		113		70 - 130	
	MSD	1506890-84	ND	27.170	25.000	ug/L	3.8	109	20	70 - 130	
Toluene	MS	1506890-84	ND	27.660	25.000	ug/L		111		70 - 130	
	MSD	1506890-84	ND	27.760	25.000	ug/L	0.4	111	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1506890-84	ND	9.6300	10.000	ug/L		96.3		75 - 125	
	MSD	1506890-84	ND	9.5100	10.000	ug/L	1.3	95.1		75 - 125	
Toluene-d8 (Surrogate)	MS	1506890-84	ND	10.030	10.000	ug/L		100		80 - 120	
	MSD	1506890-84	ND	9.8400	10.000	ug/L	1.9	98.4		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1506890-84	ND	9.2400	10.000	ug/L		92.4		80 - 120	
	MSD	1506890-84	ND	9.5400	10.000	ug/L	3.2	95.4		80 - 120	

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Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYE0254						
Acenaphthene	BYE0254-BLK1	ND	ug/L	0.10	0.055	
Acenaphthylene	BYE0254-BLK1	ND	ug/L	0.10	0.047	
Anthracene	BYE0254-BLK1	ND	ug/L	0.10	0.017	
Benzo[a]anthracene	BYE0254-BLK1	ND	ug/L	0.10	0.026	
Benzo[b]fluoranthene	BYE0254-BLK1	ND	ug/L	0.10	0.040	
Benzo[k]fluoranthene	BYE0254-BLK1	ND	ug/L	0.10	0.051	
Benzo[a]pyrene	BYE0254-BLK1	ND	ug/L	0.10	0.026	
Benzo[g,h,i]perylene	BYE0254-BLK1	ND	ug/L	0.10	0.043	
Chrysene	BYE0254-BLK1	ND	ug/L	0.10	0.022	
Dibenzo[a,h]anthracene	BYE0254-BLK1	ND	ug/L	0.10	0.044	
Fluoranthene	BYE0254-BLK1	ND	ug/L	0.10	0.012	
Fluorene	BYE0254-BLK1	ND	ug/L	0.10	0.030	
Indeno[1,2,3-cd]pyrene	BYE0254-BLK1	ND	ug/L	0.10	0.044	
Naphthalene	BYE0254-BLK1	ND	ug/L	0.10	0.077	
Phenanthrene	BYE0254-BLK1	ND	ug/L	0.10	0.022	
Pyrene	BYE0254-BLK1	ND	ug/L	0.10	0.022	
Nitrobenzene-d5 (Surrogate)	**BYE0254-BLK1**	**110**	%	**40 - 130 (LCL - UCL)**		
2-Fluorobiphenyl (Surrogate)	**BYE0254-BLK1**	**73.8**	%	**50 - 120 (LCL - UCL)**		
p-Terphenyl-d14 (Surrogate)	**BYE0254-BLK1**	**65.3**	%	**40 - 130 (LCL - UCL)**		

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P.O. Box 308
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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0254										
Acenaphthene	BYE0254-BS1	LCS	0.78839	1.0000	ug/L	78.8		60 - 110		
Acenaphthylene	BYE0254-BS1	LCS	1.0171	1.0000	ug/L	102		60 - 120		
Anthracene	BYE0254-BS1	LCS	1.0114	1.0000	ug/L	101		60 - 130		
Benzo[a]anthracene	BYE0254-BS1	LCS	0.95621	1.0000	ug/L	95.6		60 - 130		
Benzo[b]fluoranthene	BYE0254-BS1	LCS	0.69298	1.0000	ug/L	69.3		50 - 130		
Benzo[k]fluoranthene	BYE0254-BS1	LCS	0.70878	1.0000	ug/L	70.9		60 - 120		
Benzo[a]pyrene	BYE0254-BS1	LCS	0.84080	1.0000	ug/L	84.1		60 - 120		
Benzo[g,h,i]perylene	BYE0254-BS1	LCS	0.60188	1.0000	ug/L	60.2		40 - 120		
Chrysene	BYE0254-BS1	LCS	0.78837	1.0000	ug/L	78.8		60 - 110		
Dibenzo[a,h]anthracene	BYE0254-BS1	LCS	0.44577	1.0000	ug/L	44.6		40 - 120		
Fluoranthene	BYE0254-BS1	LCS	0.99143	1.0000	ug/L	99.1		60 - 120		
Fluorene	BYE0254-BS1	LCS	0.90648	1.0000	ug/L	90.6		60 - 120		
Indeno[1,2,3-cd]pyrene	BYE0254-BS1	LCS	0.69177	1.0000	ug/L	69.2		40 - 130		
Naphthalene	BYE0254-BS1	LCS	0.76160	1.0000	ug/L	76.2		60 - 110		
Phenanthrene	BYE0254-BS1	LCS	0.77210	1.0000	ug/L	77.2		60 - 120		
Pyrene	BYE0254-BS1	LCS	0.92557	1.0000	ug/L	92.6		50 - 125		
Nitrobenzene-d5 (Surrogate)	BYE0254-BS1	LCS	4.4235	4.0000	ug/L	111		40 - 130		
2-Fluorobiphenyl (Surrogate)	BYE0254-BS1	LCS	2.9588	4.0000	ug/L	74.0		50 - 120		
p-Terphenyl-d14 (Surrogate)	BYE0254-BS1	LCS	2.4835	4.0000	ug/L	62.1		40 - 130		

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Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0254	Used client sample: N										
Acenaphthene	MS	1506890-81	ND	0.73304	1.0000	ug/L		73.3		60 - 110	
	MSD	1506890-81	ND	0.85642	1.0000	ug/L	15.5	85.6	30	60 - 110	
Acenaphthylene	MS	1506890-81	ND	0.96242	1.0000	ug/L		96.2		60 - 120	
	MSD	1506890-81	ND	1.0996	1.0000	ug/L	13.3	110	30	60 - 120	
Anthracene	MS	1506890-81	ND	0.94181	1.0000	ug/L		94.2		60 - 130	
	MSD	1506890-81	ND	1.0992	1.0000	ug/L	15.4	110	30	60 - 130	
Benzo[a]anthracene	MS	1506890-81	ND	0.86025	1.0000	ug/L		86.0		60 - 120	
	MSD	1506890-81	ND	1.0932	1.0000	ug/L	23.8	109	30	60 - 120	
Benzo[b]fluoranthene	MS	1506890-81	ND	0.62561	1.0000	ug/L		62.6		50 - 130	
	MSD	1506890-81	ND	0.73629	1.0000	ug/L	16.3	73.6	30	50 - 130	
Benzo[k]fluoranthene	MS	1506890-81	ND	0.72139	1.0000	ug/L		72.1		60 - 120	
	MSD	1506890-81	ND	0.74584	1.0000	ug/L	3.3	74.6	30	60 - 120	
Benzo[a]pyrene	MS	1506890-81	ND	0.75587	1.0000	ug/L		75.6		60 - 120	
	MSD	1506890-81	ND	0.92406	1.0000	ug/L	20.0	92.4	30	60 - 120	
Benzo[g,h,i]perylene	MS	1506890-81	ND	0.67880	1.0000	ug/L		67.9		40 - 120	
	MSD	1506890-81	ND	0.85832	1.0000	ug/L	23.4	85.8	30	40 - 120	
Chrysene	MS	1506890-81	ND	0.74874	1.0000	ug/L		74.9		60 - 110	
	MSD	1506890-81	ND	0.83332	1.0000	ug/L	10.7	83.3	30	60 - 110	
Dibenzo[a,h]anthracene	MS	1506890-81	ND	0.59020	1.0000	ug/L		59.0		40 - 120	
	MSD	1506890-81	ND	0.65560	1.0000	ug/L	10.5	65.6	30	40 - 120	
Fluoranthene	MS	1506890-81	ND	0.89645	1.0000	ug/L		89.6		60 - 120	
	MSD	1506890-81	ND	1.1415	1.0000	ug/L	24.0	114	30	60 - 120	
Fluorene	MS	1506890-81	ND	0.85030	1.0000	ug/L		85.0		60 - 120	
	MSD	1506890-81	ND	1.0300	1.0000	ug/L	19.1	103	30	60 - 120	
Indeno[1,2,3-cd]pyrene	MS	1506890-81	ND	0.71005	1.0000	ug/L		71.0		40 - 130	
	MSD	1506890-81	ND	0.92615	1.0000	ug/L	26.4	92.6	30	40 - 130	
Naphthalene	MS	1506890-81	ND	0.70865	1.0000	ug/L		70.9		60 - 110	
	MSD	1506890-81	ND	0.81072	1.0000	ug/L	13.4	81.1	30	60 - 110	
Phenanthrene	MS	1506890-81	ND	0.72502	1.0000	ug/L		72.5		60 - 120	
	MSD	1506890-81	ND	0.84045	1.0000	ug/L	14.7	84.0	30	60 - 120	
Pyrene	MS	1506890-81	ND	0.92617	1.0000	ug/L		92.6		50 - 125	
	MSD	1506890-81	ND	0.98552	1.0000	ug/L	6.2	98.6	30	50 - 125	
Nitrobenzene-d5 (Surrogate)	MS	1506890-81	ND	4.2329	4.0000	ug/L		106		40 - 130	
	MSD	1506890-81	ND	4.7659	4.0000	ug/L	11.8	119		40 - 130	
2-Fluorobiphenyl (Surrogate)	MS	1506890-81	ND	2.7365	4.0000	ug/L		68.4		50 - 120	
	MSD	1506890-81	ND	3.0758	4.0000	ug/L	11.7	76.9		50 - 120	

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Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0254	Used client sample: N										
p-Terphenyl-d14 (Surrogate)	MS	1506890-81	ND	2.5221	4.0000	ug/L		63.1		40 - 130	
	MSD	1506890-81	ND	2.6058	4.0000	ug/L	3.3	65.1		40 - 130	

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Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYE0253						
TPH - Diesel (FFP)	BYE0253-BLK1	ND	ug/L	200	34	
TPH - Crude Oil	BYE0253-BLK1	ND	ug/L	500	140	
Tetracosane (Surrogate)	**BYE0253-BLK1**	**64.4**	%	**37 - 134 (LCL - UCL)**		

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Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0253										
TPH - Diesel (FFP)	BYE0253-BS1	LCS	2232.3	2500.0	ug/L	89.3		52 - 128		
Tetracosane (Surrogate)	BYE0253-BS1	LCS	87.040	100.00	ug/L	87.0		37 - 134		

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0253	Used client sample: N										
TPH - Diesel (FFP)	MS	1506890-82	ND	1932.4	2500.0	ug/L		77.3		50 - 127	
	MSD	1506890-82	ND	1918.4	2500.0	ug/L	0.7	76.7	24	50 - 127	
Tetracosane (Surrogate)	MS	1506890-82	ND	78.170	100.00	ug/L		78.2		37 - 134	
	MSD	1506890-82	ND	74.755	100.00	ug/L	4.5	74.8		37 - 134	

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYE0154						
Total Dissolved Solids @ 180 C	BYE0154-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYE0293						
Bicarbonate Alkalinity as CaCO3	BYE0293-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BYE0293-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYE0329						
Total Calcium	**BYE0329-BLK1**	**0.031791**	**mg/L**	**0.10**	**0.015**	**J**
Total Magnesium	BYE0329-BLK1	ND	mg/L	0.050	0.019	
Total Sodium	BYE0329-BLK1	ND	mg/L	0.50	0.051	
Total Potassium	BYE0329-BLK1	ND	mg/L	1.0	0.13	
QC Batch ID: BYE0395						
Bromide	BYE0395-BLK1	ND	mg/L	0.10	0.035	
Chloride	BYE0395-BLK1	ND	mg/L	0.50	0.061	
Sulfate	BYE0395-BLK1	ND	mg/L	1.0	0.10	

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0154										
Total Dissolved Solids @ 180 C	BYE0154-BS1	LCS	560.00	586.00	mg/L	95.6		90 - 110		
QC Batch ID: BYE0329										
Total Calcium	BYE0329-BS1	LCS	11.156	10.000	mg/L	112		85 - 115		
Total Magnesium	BYE0329-BS1	LCS	10.438	10.000	mg/L	104		85 - 115		
Total Sodium	BYE0329-BS1	LCS	10.812	10.000	mg/L	108		85 - 115		
Total Potassium	BYE0329-BS1	LCS	10.690	10.000	mg/L	107		85 - 115		
QC Batch ID: BYE0395										
Bromide	BYE0395-BS1	LCS	2.0740	2.0000	mg/L	104		90 - 110		
Chloride	BYE0395-BS1	LCS	50.520	50.000	mg/L	101		90 - 110		
Sulfate	BYE0395-BS1	LCS	103.04	100.00	mg/L	103		90 - 110		

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
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Project Number: [none]
Project Manager: Randy Horne

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0154	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1510376-01	1050.0	1040.0		mg/L	1.0		10		
QC Batch ID: BYE0293	Used client sample: N										
Bicarbonate Alkalinity as CaCO3	DUP	1510314-01	135.09	127.49		mg/L	5.8		10		
Carbonate Alkalinity as CaCO3	DUP	1510314-01	ND	ND		mg/L			10		
QC Batch ID: BYE0329	Used client sample: N										
Total Calcium	DUP	**1510391-02**	**1145.6**	**1171.0**		**mg/L**	**2.2**		**20**		
	MS	**1510391-02**	**1145.6**	**1366.9**	**10.000**	**mg/L**		**2210**		**75 - 125**	**A03**
	MSD	**1510391-02**	**1145.6**	**1429.3**	**10.000**	**mg/L**	**4.5**	**2840**	**20**	**75 - 125**	**A03**
Total Magnesium	DUP	**1510391-02**	**3941.9**	**4029.2**		**mg/L**	**2.2**		**20**		
	MS	**1510391-02**	**3941.9**	**4679.4**	**10.000**	**mg/L**		**7380**		**75 - 125**	**A03**
	MSD	**1510391-02**	**3941.9**	**4895.6**	**10.000**	**mg/L**	**4.5**	**9540**	**20**	**75 - 125**	**A03**
Total Sodium	DUP	**1510391-02**	**11188**	**11586**		**mg/L**	**3.5**		**20**		
	MS	**1510391-02**	**11188**	**12778**	**10.000**	**mg/L**		**15900**		**75 - 125**	**A03**
	MSD	**1510391-02**	**11188**	**13097**	**10.000**	**mg/L**	**2.5**	**19100**	**20**	**75 - 125**	**A03**
Total Potassium	DUP	**1510391-02**	**154.45**	**164.55**		**mg/L**	**6.3**		**20**		
	MS	**1510391-02**	**154.45**	**194.60**	**10.000**	**mg/L**		**401**		**75 - 125**	**A03**
	MSD	**1510391-02**	**154.45**	**206.41**	**10.000**	**mg/L**	**5.9**	**520**	**20**	**75 - 125**	**A03**
QC Batch ID: BYE0395	Used client sample: N										
Bromide	DUP	1510301-01	ND	ND		mg/L			10		
	MS	1510301-01	ND	2.2990	2.0202	mg/L		114		80 - 120	
	MSD	1510301-01	ND	2.2859	2.0202	mg/L	0.6	113	10	80 - 120	
Chloride	DUP	1510301-01	37.440	37.593		mg/L	0.4		10		
	MS	1510301-01	37.440	92.317	50.505	mg/L		109		80 - 120	
	MSD	1510301-01	37.440	92.092	50.505	mg/L	0.2	108	10	80 - 120	
Sulfate	DUP	1510301-01	6.5520	6.4010		mg/L	2.3		10		
	MS	1510301-01	6.5520	110.64	101.01	mg/L		103		80 - 120	
	MSD	1510301-01	6.5520	110.34	101.01	mg/L	0.3	103	10	80 - 120	

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
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Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYE0240						
Hexavalent Chromium	**BYE0240-BLK1**	**0.70700**	**ug/L**	**2.0**	**0.70**	**J**
QC Batch ID: BYE0329						
Total Antimony	BYE0329-BLK1	ND	mg/L	0.10	0.0085	
Total Arsenic	BYE0329-BLK1	ND	mg/L	0.050	0.0078	
Total Barium	BYE0329-BLK1	ND	mg/L	0.010	0.0035	
Total Beryllium	BYE0329-BLK1	ND	mg/L	0.010	0.00050	
Total Boron	**BYE0329-BLK1**	**0.037576**	**mg/L**	**0.10**	**0.013**	**J**
Total Cadmium	BYE0329-BLK1	ND	mg/L	0.010	0.0011	
Total Chromium	BYE0329-BLK1	ND	mg/L	0.010	0.0011	
Total Cobalt	BYE0329-BLK1	ND	mg/L	0.050	0.0013	
Total Copper	**BYE0329-BLK1**	**0.0013041**	**mg/L**	**0.010**	**0.0011**	**J**
Total Iron	BYE0329-BLK1	ND	mg/L	0.050	0.030	
Total Lead	BYE0329-BLK1	ND	mg/L	0.050	0.0040	
Total Lithium	BYE0329-BLK1	ND	mg/L	0.020	0.0062	
Total Manganese	BYE0329-BLK1	ND	mg/L	0.010	0.0040	
Total Molybdenum	BYE0329-BLK1	ND	mg/L	0.050	0.0012	
Total Nickel	BYE0329-BLK1	ND	mg/L	0.010	0.0020	
Total Selenium	BYE0329-BLK1	ND	mg/L	0.10	0.015	
Total Silver	BYE0329-BLK1	ND	mg/L	0.010	0.0019	
Total Strontium	BYE0329-BLK1	ND	mg/L	0.010	0.0010	
Total Thallium	BYE0329-BLK1	ND	mg/L	0.10	0.024	
Total Vanadium	BYE0329-BLK1	ND	mg/L	0.010	0.0022	
Total Zinc	**BYE0329-BLK1**	**0.0047111**	**mg/L**	**0.050**	**0.0023**	**J**
QC Batch ID: BYE0426						
Total Mercury	BYE0426-BLK1	ND	mg/L	0.00020	0.000033	
QC Batch ID: BYE0570						
Total Recoverable Uranium	BYE0570-BLK1	ND	pCi/L	0.67	0.067	

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYE0240										
Hexavalent Chromium	BYE0240-BS1	LCS	52.402	50.000	ug/L	105		85 - 115		
QC Batch ID: BYE0329										
Total Antimony	BYE0329-BS1	LCS	0.41702	0.40000	mg/L	104		85 - 115		
Total Arsenic	BYE0329-BS1	LCS	0.20354	0.20000	mg/L	102		85 - 115		
Total Barium	BYE0329-BS1	LCS	0.44544	0.40000	mg/L	111		85 - 115		
Total Beryllium	BYE0329-BS1	LCS	0.21096	0.20000	mg/L	105		85 - 115		
Total Boron	BYE0329-BS1	LCS	1.0646	1.0000	mg/L	106		85 - 115		
Total Cadmium	BYE0329-BS1	LCS	0.20717	0.20000	mg/L	104		85 - 115		
Total Chromium	BYE0329-BS1	LCS	0.20623	0.20000	mg/L	103		85 - 115		
Total Cobalt	BYE0329-BS1	LCS	0.21009	0.20000	mg/L	105		85 - 115		
Total Copper	BYE0329-BS1	LCS	0.39223	0.40000	mg/L	98.1		85 - 115		
Total Iron	BYE0329-BS1	LCS	1.1224	1.0000	mg/L	112		85 - 115		
Total Lead	BYE0329-BS1	LCS	0.42736	0.40000	mg/L	107		85 - 115		
Total Lithium	BYE0329-BS1	LCS	0.22210	0.20000	mg/L	111		85 - 115		
Total Manganese	BYE0329-BS1	LCS	0.53660	0.50000	mg/L	107		85 - 115		
Total Molybdenum	BYE0329-BS1	LCS	0.21370	0.20000	mg/L	107		85 - 115		
Total Nickel	BYE0329-BS1	LCS	0.41999	0.40000	mg/L	105		85 - 115		
Total Selenium	BYE0329-BS1	LCS	0.20720	0.20000	mg/L	104		85 - 115		
Total Silver	BYE0329-BS1	LCS	0.099726	0.10000	mg/L	99.7		85 - 115		
Total Strontium	BYE0329-BS1	LCS	0.54414	0.50000	mg/L	109		85 - 115		
Total Thallium	BYE0329-BS1	LCS	0.45080	0.40000	mg/L	113		85 - 115		
Total Vanadium	BYE0329-BS1	LCS	0.20794	0.20000	mg/L	104		85 - 115		
Total Zinc	BYE0329-BS1	LCS	0.51290	0.50000	mg/L	103		85 - 115		
QC Batch ID: BYE0426										
Total Mercury	BYE0426-BS1	LCS	0.0010000	0.0010000	mg/L	100		85 - 115		
QC Batch ID: BYE0570										
Total Recoverable Uranium	BYE0570-BS1	LCS	24.915	26.800	pCi/L	93.0		85 - 115		

Naftex Operating Company
P.O. Box 308
Edison, CA 93320

Reported: 07/06/2015 15:03
Project: Produced Water Pond Testing
Project Number: [none]
Project Manager: Randy Horne

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0240	Used client sample: Y - Description: Race Track Emergency Sump, 04/30/2015 10:40										
Hexavalent Chromium	DUP	1510325-01	ND	ND		ug/L			10		
	MS	1510325-01	ND	50.391	52.632	ug/L		95.7		85 - 115	
	MSD	1510325-01	ND	50.358	52.632	ug/L	0.1	95.7	10	85 - 115	
QC Batch ID: BYE0329	Used client sample: N										
Total Antimony	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.37937	0.40000	mg/L		94.8		75 - 125	J
	MSD	1510391-02	ND	0.39936	0.40000	mg/L	5.1	99.8	20	75 - 125	J
Total Arsenic	DUP	**1510391-02**	**ND**	**ND**		**mg/L**			**20**		
	MS	**1510391-02**	**ND**	**ND**	**0.20000**	**mg/L**		**63.4**		**75 - 125**	**Q03**
	MSD	**1510391-02**	**ND**	**ND**	**0.20000**	**mg/L**	**220**	**-3.0**	**20**	**75 - 125**	**Q03**
Total Barium	DUP	1510391-02	0.12069	ND		mg/L			20		
	MS	1510391-02	0.12069	0.56079	0.40000	mg/L		110		75 - 125	
	MSD	1510391-02	0.12069	0.59840	0.40000	mg/L	6.5	119	20	75 - 125	
Total Beryllium	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.21104	0.20000	mg/L		106		75 - 125	
	MSD	1510391-02	ND	0.21432	0.20000	mg/L	1.5	107	20	75 - 125	
Total Boron	DUP	**1510391-02**	**24.258**	**25.338**		**mg/L**	**4.4**		**20**		
	MS	**1510391-02**	**24.258**	**29.690**	**1.0000**	**mg/L**		**543**		**75 - 125**	**A03**
	MSD	**1510391-02**	**24.258**	**30.461**	**1.0000**	**mg/L**	**2.6**	**620**	**20**	**75 - 125**	**A03**
Total Cadmium	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.20475	0.20000	mg/L		102		75 - 125	
	MSD	1510391-02	ND	0.20676	0.20000	mg/L	1.0	103	20	75 - 125	
Total Chromium	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.17600	0.20000	mg/L		88.0		75 - 125	J
	MSD	1510391-02	ND	0.17948	0.20000	mg/L	2.0	89.7	20	75 - 125	J
Total Cobalt	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.18499	0.20000	mg/L		92.5		75 - 125	J
	MSD	1510391-02	ND	0.19775	0.20000	mg/L	6.7	98.9	20	75 - 125	J
Total Copper	DUP	**1510391-02**	**0.034769**	**0.045745**		**mg/L**	**27.3**		**20**		**J,A02**
	MS	**1510391-02**	**0.034769**	**0.48381**	**0.40000**	**mg/L**		**112**		**75 - 125**	
	MSD	**1510391-02**	**0.034769**	**0.45108**	**0.40000**	**mg/L**	**7.0**	**104**	**20**	**75 - 125**	
Total Iron	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.99375	1.0000	mg/L		99.4		75 - 125	J
	MSD	1510391-02	ND	1.1824	1.0000	mg/L	17.3	118	20	75 - 125	
Total Lead	DUP	**1510391-02**	**ND**	**ND**		**mg/L**			**20**		
	MS	**1510391-02**	**ND**	**0.52931**	**0.40000**	**mg/L**		**132**		**75 - 125**	**J,Q03**
	MSD	**1510391-02**	**ND**	**0.47214**	**0.40000**	**mg/L**	**11.4**	**118**	**20**	**75 - 125**	**J**

Naftex Operating Company
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Edison, CA 93320

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Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYE0329	Used client sample: N										
Total Lithium	DUP	**1510391-02**	**7.7951**	**7.9080**		**mg/L**	**1.4**		**20**		
	MS	**1510391-02**	**7.7951**	**9.1436**	**0.20000**	**mg/L**		**674**		**75 - 125**	**Q03**
	MSD	**1510391-02**	**7.7951**	**9.6339**	**0.20000**	**mg/L**	**5.2**	**919**	**20**	**75 - 125**	**Q03**
Total Manganese	DUP	**1510391-02**	**0.70263**	**0.72726**		**mg/L**	**3.4**		**20**		
	MS	**1510391-02**	**0.70263**	**1.3517**	**0.50000**	**mg/L**		**130**		**75 - 125**	**Q03**
	MSD	**1510391-02**	**0.70263**	**1.3730**	**0.50000**	**mg/L**	**1.6**	**134**	**20**	**75 - 125**	**Q03**
Total Molybdenum	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.18954	0.20000	mg/L		94.8		75 - 125	J
	MSD	1510391-02	ND	0.20639	0.20000	mg/L	8.5	103	20	75 - 125	J
Total Nickel	DUP	**1510391-02**	**0.81657**	**0.85084**		**mg/L**	**4.1**		**20**		
	MS	**1510391-02**	**0.81657**	**1.3624**	**0.40000**	**mg/L**		**136**		**75 - 125**	**Q03**
	MSD	**1510391-02**	**0.81657**	**1.4053**	**0.40000**	**mg/L**	**3.1**	**147**	**20**	**75 - 125**	**Q03**
Total Selenium	DUP	**1510391-02**	**ND**	**ND**		**mg/L**			**20**		
	MS	**1510391-02**	**ND**	**0.36672**	**0.20000**	**mg/L**		**183**		**75 - 125**	**J,Q03**
	MSD	**1510391-02**	**ND**	**0.63216**	**0.20000**	**mg/L**	**53.1**	**316**	**20**	**75 - 125**	**J,Q02, Q03**
Total Silver	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.083016	0.10000	mg/L		83.0		75 - 125	J
	MSD	1510391-02	ND	0.089955	0.10000	mg/L	8.0	90.0	20	75 - 125	J
Total Strontium	DUP	**1510391-02**	**19.984**	**20.885**		**mg/L**	**4.4**		**20**		
	MS	**1510391-02**	**19.984**	**23.216**	**0.50000**	**mg/L**		**646**		**75 - 125**	**A03**
	MSD	**1510391-02**	**19.984**	**23.959**	**0.50000**	**mg/L**	**3.1**	**795**	**20**	**75 - 125**	**A03**
Total Thallium	DUP	**1510391-02**	**ND**	**ND**		**mg/L**			**20**		
	MS	**1510391-02**	**ND**	**ND**	**0.40000**	**mg/L**		**56.3**		**75 - 125**	**Q03**
	MSD	**1510391-02**	**ND**	**ND**	**0.40000**	**mg/L**	**1.3**	**55.6**	**20**	**75 - 125**	**Q03**
Total Vanadium	DUP	1510391-02	ND	ND		mg/L			20		
	MS	1510391-02	ND	0.20537	0.20000	mg/L		103		75 - 125	
	MSD	1510391-02	ND	0.21225	0.20000	mg/L	3.3	106	20	75 - 125	
Total Zinc	DUP	**1510391-02**	**0.074828**	**0.053583**		**mg/L**	**33.1**		**20**		**J,A02**
	MS	**1510391-02**	**0.074828**	**0.69651**	**0.50000**	**mg/L**		**124**		**75 - 125**	**J**
	MSD	**1510391-02**	**0.074828**	**0.70356**	**0.50000**	**mg/L**	**1.0**	**126**	**20**	**75 - 125**	**J,Q03**
QC Batch ID: BYE0426	Used client sample: N										
Total Mercury	DUP	1510603-03	ND	ND		mg/L			20		
	MS	1510603-03	ND	0.0010075	0.0010000	mg/L		101		70 - 130	
	MSD	1510603-03	ND	0.00099000	0.0010000	mg/L	1.8	99.0	20	70 - 130	
QC Batch ID: BYE0570	Used client sample: N										
Total Recoverable Uranium	DUP	1510365-06	2.9982	3.0505		pCi/L	1.7		20		
	MS	1510365-06	2.9982	31.209	26.800	pCi/L		105		70 - 130	
	MSD	1510365-06	2.9982	31.754	26.800	pCi/L	1.7	107	20	70 - 130	

BSK Associates
Engineers & Laboratories

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5E0062
5/12/2015
Invoice: A509659

Kerrie Vaughan
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308

RE: Report for A5E0062 General: Project Manager-Kerrie Vaughan

Dear Kerrie Vaughan,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 5/1/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

Kijuana Hartshorn, Project Coordinator

If additional clarification of any information is required, please contact your Project Manager, Stephane Maupas , at (800) 877-8310 or (559) 497-2888 x212.

NELAP ACCREDITED TNI LABORATORY

Accredited in Accordance with NELAP
ORELAP #4021

BSK Associates Engineers & Laboratories

A5E0062

General: Project Manager-Kerrie Vaughan

Case Narrative

Project and Report Details		Invoice Details	
Client:	BC Laboratories	**Invoice To:**	BC Laboratories
Report To:	Kerrie Vaughan	**Invoice Attn:**	Kerrie Vaughan
Project #:	1510325	**Project PO#:**	-
Received:	5/01/2015 - 15:37		
Report Due:	5/14/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt °C: 4.0

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
Kerrie Vaughan	FINAL.RPT	

BSK Associates Engineers & Laboratories

A5E0062

General: Project Manager-Kerrie Vaughan

1510325

Certificate of Analysis

Sample ID: A5E0062-01
Sampled By: Client
Sample Description: 1510325-01

Sample Date - Time: 04/30/15 - 10:40
Matrix: Water
Sample Type: Grab

BSK Associates Fresno

Radiological

Analyte	Method	Result	Units	Batch	Prepared	Analyzed	Qual
Gross Alpha	EPA 00-02	ND	pCi/L	A505030	05/07/15	05/08/15	
1.65 Sigma Uncertainty		0.191	±				
MDA95		2.15	pCi/L				

BSK Associates Engineers & Laboratories

A5E0062

General: Project Manager-Kerrie Vaughan

BSK Associates Fresno

Radiological Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
EPA 00-02 - Quality Control											
Batch: A505030										Prepared: 5/7/2015	
Prep Method: EPA 00-02										Analyst: SAB	
Blank (A505030-BLK1)											
1.65 Sigma Uncertainty	ND		±							05/08/15	
Gross Alpha	ND	3	pCi/L							05/08/15	
MDA95	ND	0.00	pCi/L							05/08/15	
Blank Spike (A505030-BS1)											
Gross Alpha	27.1	3	pCi/L	30		90	80-120			05/08/15	
Blank Spike Dup (A505030-BSD1)											
Gross Alpha	33.0	3	pCi/L	30		110	80-120	20	50	05/08/15	
Matrix Spike (A505030-MS1), Source: A5D2633-01											
Gross Alpha	100	3	pCi/L	120	3.07	81	70-130			05/08/15	
Matrix Spike (A505030-MS2), Source: A5E0199-01											
Gross Alpha	119	3	pCi/L	120	8.69	92	70-130			05/08/15	
Matrix Spike Dup (A505030-MSD1), Source: A5D2633-01											
Gross Alpha	120	3	pCi/L	120	3.07	97	70-130	18	50	05/08/15	
Matrix Spike Dup (A505030-MSD2), Source: A5E0199-01											
Gross Alpha	89.9	3	pCi/L	120	8.69	68	70-130	27	50	05/08/15	MS1.0 *Low*

BSK Associates Engineers & Laboratories

A5E0062

General: Project Manager-Kerrie Vaughan

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

BSK is not accredited under the NELAC program for the following parameters: **NA**

Certifications: **Please refer to our website for a copy of our Accredited Fields of Testing under each certification.**

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5E0062

05012015

BCLab4911

Turnaround: Standard
Due Date: 5/14/2015

BC Laboratories

Printed: 5/1/ Page 6 of 8
Page 1 of 1

SUBCONTRACT ORDER
BC Laboratories
4.0 **1510325**

A5E0062 05/01/2015
BCLab4911 9

SENDING LABORATORY:	**RECEIVING LABORATC**
BC Laboratories	BSK Analytical Labs $BSKSA
4100 Atlas Ct	1414 Stanislaus Street
Bakersfield, CA 93308	Fresno, CA 93706
Phone: 661-327-4911	Phone :(800) 877-8310
Fax: 661-327-1918	Fax: (559) 485-6935
Project Manager: Kerrie Vaughan	

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 1510325-01	**Water**	**Sampled:04/30/15 10:40**	[redacted]	
om900.0w Gross Alpha BSKSA	05/14/15 17:00	10/28/15 10:40		Analyze water phase only. Results needed by 5/14/2015.
Containers Supplied:				

Released By	Date	Received By	Date
Meggan Boyles	5/1/15	[signature]	5/1/15
		[signature]	5/1/15 15:37

Page 7 of 8

PMS, wet, BW

BSK Associates SR-FL-0002-13

A5E0062 05/01/2015
BCLab4911 9

Sample Integrity

BSK Bottles: Yes (No)* Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°C	(Yes) No NA	Were correct containers and preservatives received for the tests requested?	(Yes) No NA
If samples were taken today, is there evidence that chilling has begun?	Yes No (NA)	Were there bubbles in the VOA vials? (Volatiles Only)	Yes No (NA)
Did all bottles arrive unbroken and intact?	(Yes) No	Was a sufficient amount of sample received?	(Yes) No
Did all bottle labels agree with COC?	(Yes) No	Do samples have a hold time <72 hours?	(Yes) No
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No (NA)	Was PM notified of discrepancies? PM: By/Time:	Yes No (NA)

Bottles Received ("—" means preservation/chlorine checks are either N/A or are performed in the lab)

250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?						
Bact $Na_2S_2O_3$	—	—						
None (P) White Cap	—	—						
Cr6 (P) Br. Green Label $NH_4OH/(NH_4)_2SO_4$ DW	Cl, pH >8	Y N						
Cr6 (P) Pink Label Hex Chrome Buffer DW	pH 9-9.5	Y N						
Cr6 (P) Pink Label Hex Chrome Buffer WW	pH 9.3-9.7	Y N						
HNO_3 (P) Red Cap	—	—	1C*					
H_2SO_4 (P) or (AG) Yellow Cap/Label	pH <2	Y N						
NaOH (P) Green Cap	Cl, pH >10	Y N						
NaOH + ZnAc (P)	pH >9	Y N						
Dissolved Oxygen 300ml (g)	—	—						
None (AG) 608/8041/8082, 625, 552/8321, 8151, 8270	—	—						
HCl (AG) Lt. Blue Label O&G, Diesel	—	—						
Na_2O_3S+HCl (AG) Lt. Pink Label 625	—	—						
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—						
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—						
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—						
$Na_2S_2O_3$ - MCAA (CG) Orange Label 551	pH <3	Y N						
NH_4Cl (AG) Purple Label 552	—	—						
EDA (AG) Brown Label DBPs	—	—						
HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624	—	—						
Buffer pH 4 (CG)	—	—						
None (CG)	—	—						
H_3PO_4 (CG) Salmon Label	—	—						
Other:								
Asbestos 1Liter Plastic W/Foil	—	—						
Low Level Hg / Metals Double Baggie	—	—						
Bottled Water	—	—						
Clear Glass Jar: 250 / 500 / 1 Liter	—	—						
Soil Tube Brass / Steel / Plastic	—	—						
Tedlar Bag / Plastic Bag	—	—						

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: JWD @ 16:28 Labels checked by: NR @ 1623 RUSH Paged by: Page 8 of 8

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

May 19, 2015

Ms. Kerrie Vaughan
BC Laboratories
4100 Atlas Ct.
Bakersfield, CA 93308

RE: Project: 1510325
Pace Project No.: 30147382

Dear Ms. Vaughan:
Enclosed are the analytical results for sample(s) received by the laboratory on May 06, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carin A. Ferris

Carin Ferris
carin.ferris@pacelabs.com
Project Manager

Enclosures

NELAP ACCREDITED TNI LABORATORY

REPORT OF LABORATORY ANALYSIS

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 1510325
Pace Project No.: 30147382

Pennsylvania Certification IDs
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ACLASS DOD-ELAP Accreditation #: ADE-1544
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California/TNI Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Guam/PADEP Certification
Hawaii/PADEP Certification
Idaho Certification
Illinois/PADEP Certification
Indiana/PADEP Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188
Utah/TNI Certification #: PA014572014-4
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin/PADEP Certification
Wyoming Certification #: 8TMS-Q

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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 1510325
Pace Project No.: 30147382

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30147382001	**1510325-01**	Water	04/30/15 10:40	05/06/15 10:15

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SAMPLE ANALYTE COUNT

Project: 1510325
Pace Project No.: 30147382

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30147382001	1510325-01	EPA 903.1	JC2	1
		EPA 904.0	JLW	1

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(724)850-5600

PROJECT NARRATIVE

Project: 1510325
Pace Project No.: 30147382

Method: EPA 903.1
Description: 903.1 Radium 226
Client: BC Laboratories
Date: May 19, 2015

General Information:
1 sample was analyzed for EPA 903.1. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 1510325
Pace Project No.: 30147382

Method: EPA 904.0
Description: 904.0 Radium 228
Client: BC Laboratories
Date: May 19, 2015

General Information:
1 sample was analyzed for EPA 904.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1510325
Pace Project No.: 30147382

Sample: 1510325-01 **Lab ID: 30147382001** Collected: 04/30/15 10:40 Received: 05/06/15 10:15 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Sample Acceptance Policy Waiver on file from the client.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**5.57 ± 7.75 (11.1) C:NA T:67%**	pCi/L	05/18/15 12:21	13982-63-3	
Radium-228	EPA 904.0	**-1.05 ± 3.59 (8.66) C:80% T:76%**	pCi/L	05/13/15 16:38	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 1510325
Pace Project No.: 30147382

QC Batch: RADC/24412 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 30147382001

METHOD BLANK: 892048 Matrix: Water
Associated Lab Samples: 30147382001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.138 ± 0.381 (0.740) C:NA T:96%	pCi/L	05/18/15 12:11	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1510325
Pace Project No.: 30147382

QC Batch: RADC/24387
QC Batch Method: EPA 904.0
Associated Lab Samples: 30147382001

Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228

METHOD BLANK: 890253
Associated Lab Samples: 30147382001

Matrix: Water

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.526 ± 0.471 (0.960) C:76% T:81%	pCi/L	05/13/15 16:44	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 1510325
Pace Project No.: 30147382

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

SUBCONTRACT ORDER

BC Laboratories

1510325

30147302

SENDING LABORATORY:

BC Laboratories
4100 Atlas Ct
Bakersfield, CA 93308
Phone: 661-327-4911
Fax: 661-327-1918
Project Manager: Kerrie Vaughan

RECEIVING LABORATORY:

PACE Analytical $PACEA
1638 Roseytown Road, Ste 2,3 &4
Greensburg, PA 15601
Phone :(724) 850-5600
Fax: (724) 850-5601

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 1510325-01	**Water**	**Sampled:04/30/15 10:40**		
om904.0w Radium228 PACEA	05/14/15 17:00	10/28/15 10:40		Analyze water phase only. Results needed by 5/14/2015.
om903.0w Radium226 PACEA	05/14/15 17:00	10/28/15 10:40		Analyze water phase only. Results needed by 5/14/2015.
Containers Supplied:				

Released By	Date	Received By	Date
Meggan Boyles	5/1/15	[signature]	5/6/15 1015
Released By	Date	Received By	Date

Sample Condition Upon Receipt

Pace Analytical

Client Name: BC Project # 30147382

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other ______

Tracking #: 1Z9653760362610649

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap ____ Bubble Bags ✓ None ____ Other ____________

Thermometer Used NA Type of Ice: Wet Blue (None) ☐ Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: Amm 5/6/15

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☐Yes	☑No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☐Yes	☑No	☐N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11.
Sample Labels match COC:	☑Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT				
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	pH<2
exceptions: VOA, coliform, TOC, O&G, Phenols	☐Yes	☑No		Initial when completed Amm / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☐No	☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	15.
Trip Blank Present:	☐Yes	☐No	☑N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: ____________ Date/Time: ____________

Comments/ Resolution: ____________

Project Manager Review: [signature] Date: 5/6/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

J:\QAQC\Master\Document Management\Sample Mgt\SCURF\FALLC003-09 SCUR Front 3March2015 Page 12 of 13

Pace Analytical

Client Name: _____ Project Number: _____

page 2

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil Kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y N	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other	Other
1	W																		2					

SCURF Back (C016-4 15May2012).xls

Naftex Operating Company	**Reported:** 07/06/2015 15:03
P.O. Box 308	Project: Produced Water Pond Testing
Edison, CA 93320	Project Number: [none]
	Project Manager: Randy Horne

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
Q02	Matrix spike precision is not within the control limits.
Q03	Matrix spike recovery(s) is(are) not within the control limits.

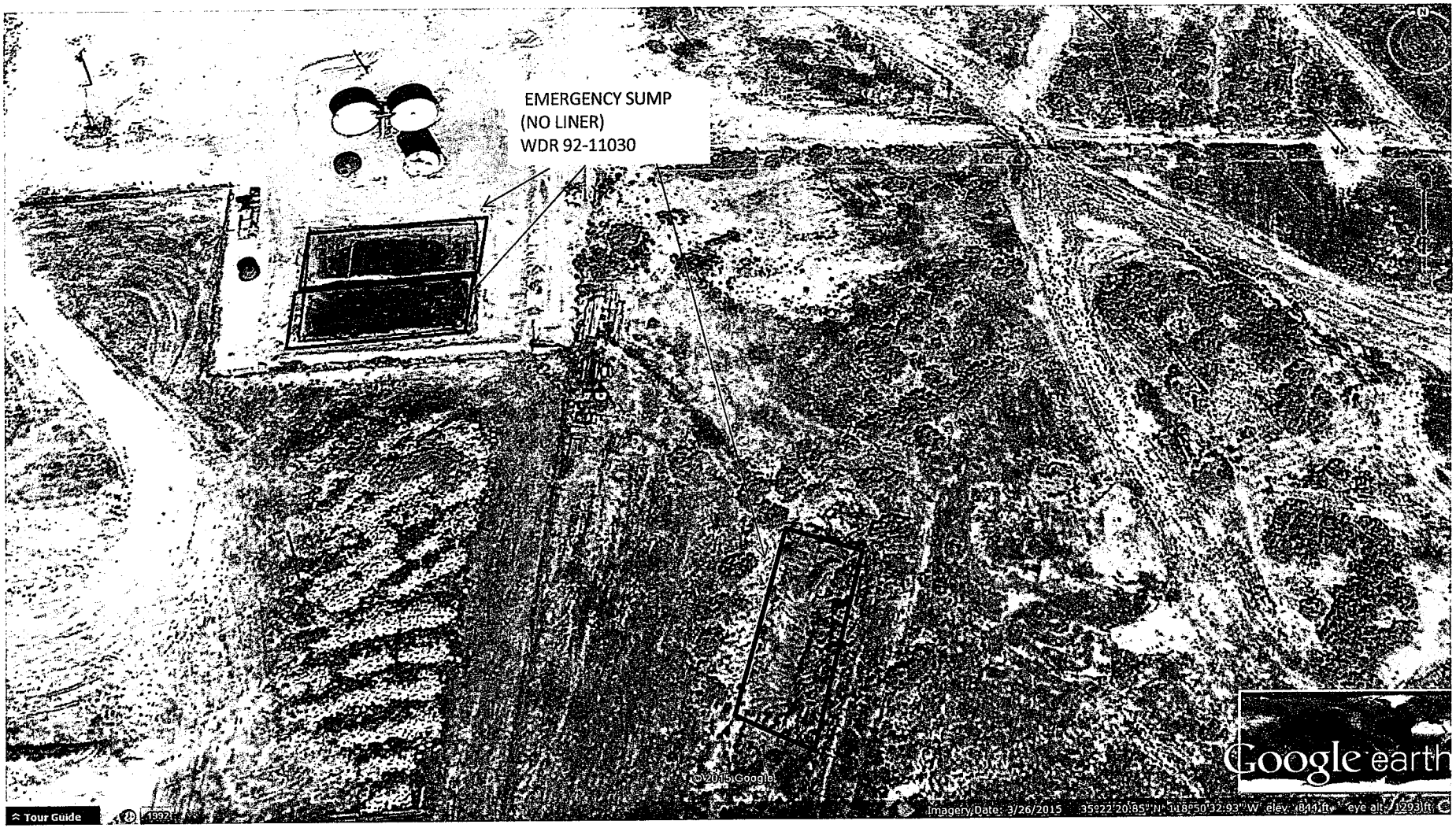
SAMP_ID	SAMP_DATE	ANALYTE	RESULT	UNITS	PQL	MDL	METHOD	CAS_NO	FLAGS	BCL_ID
Race Track Emergency Sump	04/30/2015	Benzene	ND	ug/L	0.50	0.083	EPA-8260B	71-43-2		1510325-01
Race Track Emergency Sump	04/30/2015	Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	100-41-4		1510325-01
Race Track Emergency Sump	04/30/2015	Toluene	ND	ug/L	0.50	0.093	EPA-8260B	108-88-3		1510325-01
Race Track Emergency Sump	04/30/2015	Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	1330-20-7		1510325-01
Race Track Emergency Sump	04/30/2015	p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	179601-23-1		1510325-01
Race Track Emergency Sump	04/30/2015	o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	95-47-6		1510325-01
Race Track Emergency Sump	04/30/2015	1,2-Dichloroethane-d4 (Surrogate)	94.9	%Rec			EPA-8260B	17060-07-0		1510325-01
Race Track Emergency Sump	04/30/2015	Toluene-d8 (Surrogate)	102	%Rec			EPA-8260B	2037-26-5		1510325-01
Race Track Emergency Sump	04/30/2015	4-Bromofluorobenzene (Surrogate)	86.3	%Rec			EPA-8260B	460-00-4		1510325-01
Race Track Emergency Sump	04/30/2015	Acenaphthene	ND	ug/L	0.10	0.055	EPA-8270C-SIM	83-32-9		1510325-01
Race Track Emergency Sump	04/30/2015	Acenaphthylene	ND	ug/L	0.10	0.047	EPA-8270C-SIM	208-96-8		1510325-01
Race Track Emergency Sump	04/30/2015	Anthracene	ND	ug/L	0.10	0.017	EPA-8270C-SIM	120-12-7		1510325-01
Race Track Emergency Sump	04/30/2015	Benzo[a]anthracene	ND	ug/L	0.10	0.026	EPA-8270C-SIM	56-55-3		1510325-01
Race Track Emergency Sump	04/30/2015	Benzo[b]fluoranthene	ND	ug/L	0.10	0.040	EPA-8270C-SIM	205-99-2		1510325-01
Race Track Emergency Sump	04/30/2015	Benzo[k]fluoranthene	ND	ug/L	0.10	0.051	EPA-8270C-SIM	207-08-9		1510325-01
Race Track Emergency Sump	04/30/2015	Benzo[a]pyrene	ND	ug/L	0.10	0.026	EPA-8270C-SIM	50-32-8		1510325-01
Race Track Emergency Sump	04/30/2015	Benzo[g,h,i]perylene	ND	ug/L	0.10	0.043	EPA-8270C-SIM	191-24-2		1510325-01
Race Track Emergency Sump	04/30/2015	Chrysene	ND	ug/L	0.10	0.022	EPA-8270C-SIM	218-01-9		1510325-01
Race Track Emergency Sump	04/30/2015	Dibenzo[a,h]anthracene	ND	ug/L	0.10	0.044	EPA-8270C-SIM	53-70-3		1510325-01
Race Track Emergency Sump	04/30/2015	Fluoranthene	ND	ug/L	0.10	0.012	EPA-8270C-SIM	206-44-0		1510325-01
Race Track Emergency Sump	04/30/2015	Fluorene	ND	ug/L	0.10	0.030	EPA-8270C-SIM	86-73-7		1510325-01
Race Track Emergency Sump	04/30/2015	Indeno[1,2,3-cd]pyrene	ND	ug/L	0.10	0.044	EPA-8270C-SIM	193-39-5		1510325-01
Race Track Emergency Sump	04/30/2015	Naphthalene	ND	ug/L	0.10	0.077	EPA-8270C-SIM	91-20-3		1510325-01
Race Track Emergency Sump	04/30/2015	Phenanthrene	ND	ug/L	0.10	0.022	EPA-8270C-SIM	85-01-8		1510325-01
Race Track Emergency Sump	04/30/2015	Pyrene	ND	ug/L	0.10	0.022	EPA-8270C-SIM	129-00-0		1510325-01
Race Track Emergency Sump	04/30/2015	Nitrobenzene-d5 (Surrogate)	114	%Rec			EPA-8270C-SIM	4165-60-0		1510325-01
Race Track Emergency Sump	04/30/2015	2-Fluorobiphenyl (Surrogate)	61.8	%Rec			EPA-8270C-SIM	321-60-8		1510325-01
Race Track Emergency Sump	04/30/2015	p-Terphenyl-d14 (Surrogate)	51.8	%Rec			EPA-8270C-SIM	1718-51-0		1510325-01
Race Track Emergency Sump	04/30/2015	TPH - Crude Oil	11000	ug/L	1000	280	EPA-8015B/FFP	---	A01	1510325-01
Race Track Emergency Sump	04/30/2015	Tetracosane (Surrogate)	59.2	%Rec			EPA-8015B/FFP	646-31-1	A01	1510325-01
Race Track Emergency Sump	04/30/2015	Total Calcium	18	mg/L	0.10	0.015	EPA-6010B	7440-70-2		1510325-01
Race Track Emergency Sump	04/30/2015	Total Magnesium	1.7	mg/L	0.050	0.019	EPA-6010B	7439-95-4		1510325-01
Race Track Emergency Sump	04/30/2015	Total Sodium	330	mg/L	0.50	0.051	EPA-6010B	7440-23-5		1510325-01
Race Track Emergency Sump	04/30/2015	Total Potassium	17	mg/L	1.0	0.13	EPA-6010B	7440-09-7		1510325-01
Race Track Emergency Sump	04/30/2015	Bicarbonate Alkalinity as CaCO3	310	mg/L	8.2	8.2	EPA-310.1	71-52-3		1510325-01
Race Track Emergency Sump	04/30/2015	Carbonate Alkalinity as CaCO3	15	mg/L	8.2	8.2	EPA-310.1	3812-32-6		1510325-01
Race Track Emergency Sump	04/30/2015	Bromide	1.3	mg/L	0.20	0.070	EPA-300.0	24959-67-9	A07	1510325-01
Race Track Emergency Sump	04/30/2015	Chloride	310	mg/L	1.0	0.12	EPA-300.0	16887-00-6	A07	1510325-01
Race Track Emergency Sump	04/30/2015	Sulfate	8.9	mg/L	2.0	0.20	EPA-300.0	14808-79-8	A07	1510325-01
Race Track Emergency Sump	04/30/2015	Total Dissolved Solids @ 180 C	1100	mg/L	50	50	EPA-160.1	---		1510325-01

SAMP_ID	SAMP_DATE	ANALYTE	RESULT	UNITS	PQL	MDL	METHOD	CAS_NO	FLAGS	BCL_ID
Race Track Emergency Sump	04/30/2015	Hexavalent Chromium	ND	ug/L	2.0	0.70	EPA-7196	18540-29-9		1510325-01
Race Track Emergency Sump	04/30/2015	Total Antimony	ND	mg/L	0.10	0.0085	EPA-6010B	7440-36-0		1510325-01
Race Track Emergency Sump	04/30/2015	Total Arsenic	0.36	mg/L	0.050	0.0078	EPA-6010B	7440-38-2		1510325-01
Race Track Emergency Sump	04/30/2015	Total Barium	0.10	mg/L	0.010	0.0035	EPA-6010B	7440-39-3		1510325-01
Race Track Emergency Sump	04/30/2015	Total Beryllium	ND	mg/L	0.010	0.00050	EPA-6010B	7440-41-7		1510325-01
Race Track Emergency Sump	04/30/2015	Total Boron	1.9	mg/L	0.10	0.013	EPA-6010B	7440-42-8		1510325-01
Race Track Emergency Sump	04/30/2015	Total Cadmium	ND	mg/L	0.010	0.0011	EPA-6010B	7440-43-9		1510325-01
Race Track Emergency Sump	04/30/2015	Total Chromium	ND	mg/L	0.010	0.0011	EPA-6010B	7440-47-3		1510325-01
Race Track Emergency Sump	04/30/2015	Total Cobalt	ND	mg/L	0.050	0.0013	EPA-6010B	7440-48-4		1510325-01
Race Track Emergency Sump	04/30/2015	Total Copper	0.0021	mg/L	0.010	0.0011	EPA-6010B	7440-50-8	J	1510325-01
Race Track Emergency Sump	04/30/2015	Total Iron	0.89	mg/L	0.050	0.030	EPA-6010B	7439-89-6		1510325-01
Race Track Emergency Sump	04/30/2015	Total Lead	ND	mg/L	0.050	0.0040	EPA-6010B	7439-92-1		1510325-01
Race Track Emergency Sump	04/30/2015	Total Lithium	0.20	mg/L	0.020	0.0062	EPA-6010B	7439-93-2		1510325-01
Race Track Emergency Sump	04/30/2015	Total Manganese	0.13	mg/L	0.010	0.0040	EPA-6010B	7439-96-5		1510325-01
Race Track Emergency Sump	04/30/2015	Total Mercury	ND	mg/L	0.00020	0.000033	EPA-7470A	7439-97-6		1510325-01
Race Track Emergency Sump	04/30/2015	Total Molybdenum	0.029	mg/L	0.050	0.0012	EPA-6010B	7439-98-7	J	1510325-01
Race Track Emergency Sump	04/30/2015	Total Nickel	0.011	mg/L	0.010	0.0020	EPA-6010B	7440-02-0		1510325-01
Race Track Emergency Sump	04/30/2015	Total Selenium	ND	mg/L	0.10	0.015	EPA-6010B	7782-49-2		1510325-01
Race Track Emergency Sump	04/30/2015	Total Silver	ND	mg/L	0.010	0.0019	EPA-6010B	7440-22-4		1510325-01
Race Track Emergency Sump	04/30/2015	Total Strontium	0.46	mg/L	0.010	0.0010	EPA-6010B	7440-24-6		1510325-01
Race Track Emergency Sump	04/30/2015	Total Thallium	ND	mg/L	0.10	0.024	EPA-6010B	7440-28-0		1510325-01
Race Track Emergency Sump	04/30/2015	Total Vanadium	ND	mg/L	0.010	0.0022	EPA-6010B	7440-62-2		1510325-01
Race Track Emergency Sump	04/30/2015	Total Zinc	ND	mg/L	0.050	0.0023	EPA-6010B	7440-66-6		1510325-01
Race Track Emergency Sump	04/30/2015	Total Recoverable Uranium	0.11	pCi/L	0.67	0.067	EPA-200.8	7440-61-1	J	1510325-01
Claflin Sump	04/30/2015	No Sample	No Sample	Feet			BC	---		1510325-02

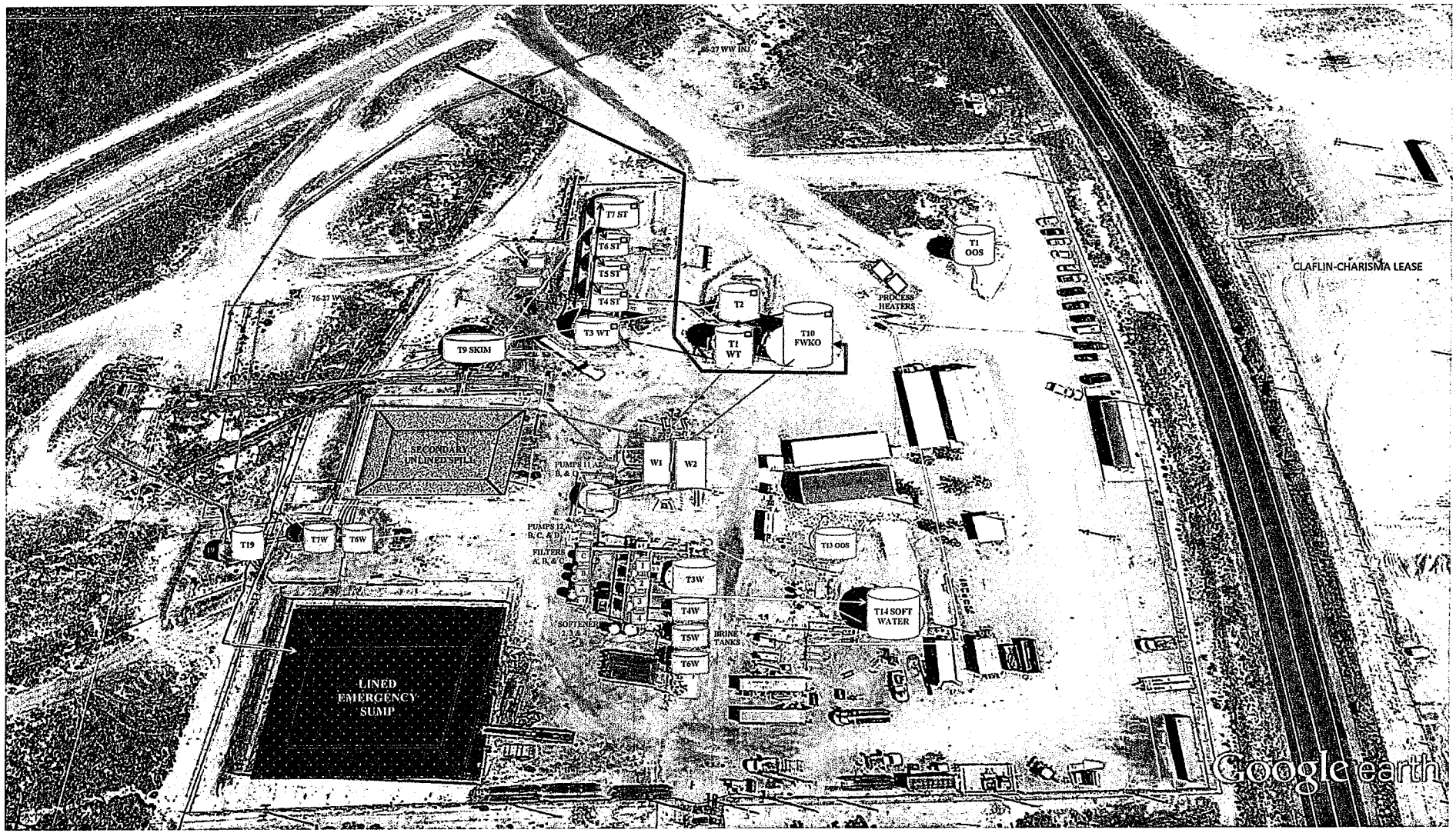
NAFTEX OPERATING COMPANY
IMPOUNDMENT INFORMATION

Field	Lease	Operator	Assessors Parcel Number	Sec.	T	R	BM	Latitude	Longitude	Length	Width	Depth	Status	Number of Ponds	Duration of Discharge (months)	Volume of Discharge per year
Edison	Charisma-Claflin	Naftex Operating Company	38801028	26	29S	29E	MD	35.37216	-118.84164	70'	20'	~6'	Idle	1	0	0
Edison	Charisma-Claflin	Naftex Operating Company	38801028	26	29S	29E	MD	35.37261	-118.84220	70'	25'	~6'	Idle	1	0	0
Edison	Charisma-Claflin	Naftex Operating Company	38801028	26	29S	29E	MD	35.37269	-118.84221	150'	40'	10'	Idle	1	0	0
Edison	Racetrack	Naftex Operating Company	38802001	27	29S	29E	MD	35.37179	-118.84515	130'	110'	~10'	Emergency need only, Lined	1	Emergency need only	Emergency need only

NAFTEX OPERATING COMPANY
CLAFLIN-CHARISMA FACILITY



NAFTEX OPERATING COMPANY
RACETRACK FACILITY



NAFTEX OPERATING COMPANY

RACETRACK AND CLAFLIN-CHARISMA LEASES